

MAR 24 2005

Summary of Safety and Effectiveness  
Quest Diagnostics Immunoassay/TDM Control

K050536

1.0 **Submitter**

Bio-Rad Laboratories  
9500 Jeronimo Road,  
Irvine, California 92618-2017  
Telephone: (949) 598-1200  
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**Contact Person**

Maria Zeballos  
Regulatory Affairs Specialist  
Telephone: (949) 598-1367

**Date of Summary Preparation**

February 24, 2005

2.0 **Device Identification**

Product Trade Name:	Quest Diagnostics Immunoassay/TDM Control
Common Name:	Multi-Analyte Controls, (Assayed and Unassayed)
Classifications:	Class I
Product Code:	JJY
Regulation Number:	CFR 862.1660

3.0 **Device to Which Substantial Equivalence is Claimed**

Lyphochek Immunoassay Plus Control  
Bio-Rad Laboratories  
Irvine, CA 92618  
Docket Number: K981532

4.0 **Description of Device**

Quest Diagnostics Immunoassay/TDM Control is prepared from human serum, with added constituents of human and animal origin, chemicals, and therapeutic drugs. The control is provided in lyophilized form for increased stability.

5.0 **Statement of Intended Use**

Quest Diagnostics Immunoassay/TDM Control is intended for use as a quality control serum to monitor the precision of laboratory testing procedures for the analytes listed in the package insert.

## 6.0 Comparison of the new device with the Predicate Device

Quest Diagnostics Immunoassay/TDM Control claims substantial equivalence to the Lyphocheck Immunoassay Plus Control currently in commercial distribution (K981532).

**Table 1.** Similarities and Differences between new and predicate device.

Characteristics	Quest Diagnostics Immunoassay/TDM Control (New Device)	Bio-Rad Laboratories Lyphocheck Immunoassay Plus Control (Predicate Device K981532)
<b>Similarities</b>		
Intended Use	Quest Diagnostics Immunoassay/TDM Control is intended for use as a quality control serum to monitor the precision of laboratory testing procedures for the analytes listed in the package insert.	Lyphocheck Immunoassay Plus Control is intended for use as an assayed quality control serum to monitor the precision of laboratory testing procedures for the analytes listed in the package insert.
Form	Lyophilized	Lyophilized
Matrix	Human Serum	Human Serum
Preservatives	Does not Contains preservatives	Does not Contains preservatives
Storage (Unopened)	2°C to 8°C Until expiration date	2°C to 8°C Until expiration date
<b>Differences</b>		
Reconstituted Vial Claim	7 days at 2 to 8°C with the following exceptions: (1) C-Peptide, Folate and PSA 3 days (2) Gastrin, Free PSA and Intact PTH assay immediately	7 days at 2°C to 8°C with the following exceptions: (1) Folate and PSA 3 days, (2) C-Peptide 1 day, (3) Intact PTH 16 hours, (4) ACTH, Calcitonin, Gastrin and Free PSA assay immediately
After Reconstituting and Freezing	No claims	All analytes 30 days at -10 to -20°C
Analytes	<p><u>Contains the following analytes:</u></p> <ul style="list-style-type: none"> <li>• 17-<math>\alpha</math>-Hydroxyprogesterone</li> <li>• Acetaminophen</li> <li>• Aldosterone</li> <li>• Alpha Fetoprotein (AFP)</li> <li>• Amikacin</li> <li>• Androstenedione</li> <li>• Caffeine</li> <li>• Carbamazepine</li> <li>• CEA</li> <li>• Chloramphenicol</li> <li>• Cortisol</li> <li>• C-Peptide</li> <li>• DHEA Sulfate</li> <li>• Digoxin</li> <li>• Disopyramide</li> <li>• Estradiol</li> <li>• Estriol, Free</li> <li>• Ethosuximide</li> <li>• Ferritin</li> <li>• Folate</li> <li>• FSH</li> <li>• Gastrin</li> <li>• Gentamicin</li> <li>• Homocysteine</li> <li>• HCG</li> <li>• HGH</li> <li>• Immunoglobulin E (IgE)</li> <li>• Insulin</li> <li>• Lidocaine</li> <li>• Lithium</li> <li>• LH</li> <li>• NAPA</li> <li>• PTH, Intact</li> <li>• Phenobarbital</li> <li>• Phenytoin</li> <li>• Primidone</li> <li>• Procainamide</li> <li>• Progesterone</li> <li>• Prolactin</li> <li>• PAP</li> <li>• PSA</li> <li>• PSA, Free</li> <li>• Quinidine</li> <li>• Salicylate</li> <li>• T3, Free</li> <li>• T3, Total</li> <li>• T4, Free</li> <li>• T4, Total</li> <li>• Testosterone</li> <li>• Theophylline</li> <li>• Tobramycin</li> <li>• TSH</li> <li>• Valproic Acid</li> <li>• Vancomycin</li> <li>• Vitamin B12</li> </ul>	<p><u>Contains the following analytes:</u></p> <ul style="list-style-type: none"> <li>• 11-Deoxycortisol</li> <li>• 17-<math>\alpha</math>-Hydroxyprogesterone</li> <li>• Acetaminophen</li> <li>• ACTH</li> <li>• Alpha Fetoprotein (AFP)</li> <li>• Amikacin</li> <li>• Aldosterone</li> <li>• Amitriptyline</li> <li>• Androstenedione</li> <li>• Caffeine</li> <li>• Calcitonin</li> <li>• Carbamazepine, Free</li> <li>• Carbamazepine</li> <li>• CEA</li> <li>• Chloramphenicol</li> <li>• Cortisol</li> <li>• C-Peptide</li> <li>• DHEA Sulfate</li> <li>• Digoxin</li> <li>• Disopyramide</li> <li>• Cyclosporine</li> <li>• Desipramine</li> <li>• DHEA</li> <li>• Estradiol</li> <li>• Estriol, Free</li> <li>• Estriol, Total</li> <li>• Estrogens, Total</li> <li>• Ethosuximide</li> <li>• Ferritin</li> <li>• Immunoglobulin E (IgE)</li> <li>• Insulin</li> <li>• Lidocaine</li> <li>• Lithium</li> <li>• LH</li> <li>• NAPA</li> <li>• Netilmicin</li> <li>• Nortriptyline</li> <li>• PTH</li> <li>• Phenobarbital</li> <li>• Phenytoin</li> <li>• Phenytoin, Free</li> <li>• Primidone</li> <li>• Procainamide</li> <li>• Progesterone</li> <li>• Prolactin</li> <li>• PAP</li> <li>• Propanolol</li> <li>• PSA</li> <li>• PSA, Free</li> <li>• Quinidine</li> <li>• Salicylate</li> <li>• T3 Free</li> <li>• T3 Total</li> <li>• T3 Uptake</li> <li>• T4 Free</li> <li>• T4 Total</li> <li>• TCA Screen</li> <li>• Testosterone</li> </ul>

Characteristics	Quest Diagnostics Immunoassay/TDM Control (New Device)	Bio-Rad Laboratories Lymphochek Immunoassay Plus Control (Predicate Device K981532)
	<p><u>Does not Contain the following analytes:</u></p> <ul style="list-style-type: none"> <li>• 11-Deoxycortisol</li> <li>• Aldosterone</li> <li>• Amitriptyline</li> <li>• Calcitonin</li> <li>• Carbamazepine, Free</li> <li>• Cyclosporine*</li> <li>• Desipramine</li> <li>• DHEA</li> <li>• Estriol, Total</li> <li>• Estrogens, Total</li> <li>• Flecainide</li> <li>• 25-Hydroxy Vitamin D</li> <li>• Angiotensin I</li> <li>• Fructosamine</li> <li>• Glucagon</li> <li>• Iron</li> <li>• TIBC</li> </ul>	<ul style="list-style-type: none"> <li>• HCG-Beta Subunit</li> <li>• Imipramine</li> <li>• Netilmicin</li> <li>• Nortriptyline</li> <li>• Phenytoin, Free</li> <li>• Propanolol</li> <li>• T3 Uptake</li> <li>• TCA Screen</li> <li>• Testosterone, Free</li> <li>• Valproic Acid, Free</li> <li>• Immunoglobulin A (IgA)</li> <li>• Immunoglobulin G (IgG)</li> <li>• Immunoglobulin M (IgM)</li> <li>• Somatomedin-C</li> <li>• TBG</li> <li>• Thyroglobulin</li> </ul>
		<ul style="list-style-type: none"> <li>• Folate</li> <li>• Flecainide</li> <li>• FSH</li> <li>• Gastrin</li> <li>• Gentamicin</li> <li>• hCG and hCG-Beta Subunit</li> <li>• hGH</li> <li>• Imipramine</li> <li>• 25-Hydroxy Vitamin D</li> <li>• Angiotensin I</li> <li>• Fructosamine</li> <li>• Glucagon</li> <li>• Iron</li> <li>• TIBC</li> </ul> <p><u>Does not Contain the following analytes:</u></p> <ul style="list-style-type: none"> <li>• Homocysteine</li> </ul>

#### 1.0 STATEMENT OF SUPPORTING DATA

Stability studies have been performed to determine the open vial stability and shelf life for the Quest Diagnostics Immunoassay/TDM Control. Product claims are as follows:

- Open vial Stability: 7 days when stored tightly capped at 2 to 8°C with the following exceptions: C-Peptide, Folate and PSA are stable for 3 days and Gastrin, Free PSA and Intact PTH should be assayed immediately after reconstitution.
- Shelf Life: 36 months when stored at 2 to 8 °C

All supporting data is retained on file at Bio-Rad Laboratories.



DEPARTMENT OF HEALTH & HUMAN SERVICES

MAR 24 2005

Food and Drug Administration  
2098 Gaither Road  
Rockville MD 20850

Ms. Elizabeth Platt  
Regulatory Affairs Manager/ Quality Assurance  
Bio-Rad Laboratories, QSD  
9500 Jeronimo Road  
Irvine, CA 92618-2017

Re: k050536  
Trade/Device Name: Quest Diagnostics Immunoassay/TDM Control  
Regulation Number: 21 CFR 862.1660  
Regulation Name: Quality control material (assayed and unassayed)  
Regulatory Class: Class I  
Product Code: JJY  
Dated: February 24, 2005  
Received: March 2, 2005

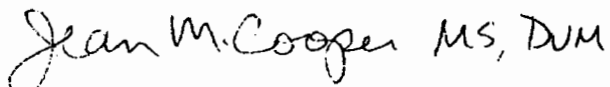
Dear Ms. Platt:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in Title 21, Code of Federal Regulations (CFR), Parts 800 to 895. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Parts 801 and 809); and good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820).

Sincerely yours,

A handwritten signature in cursive script that reads "Jean M. Cooper MS, DVM".

Jean M. Cooper, MS, D.V.M.

Director

Division of Chemistry and Toxicology

Office of *In Vitro* Diagnostic Device

Evaluation and Safety

Center for Devices and

Radiological Health

Enclosure

## Indications for Use

510(k) Number (if known):

Device Name: Quest Diagnostics Immunoassay/TDM Control

Indications For Use: Quest Diagnostics Immunoassay/TDM Control is intended for use as a quality control serum to monitor the precision of laboratory testing procedures for the analytes listed in this package insert.

Prescription Use   X    
(Part 21 CFR 801 Subpart D)

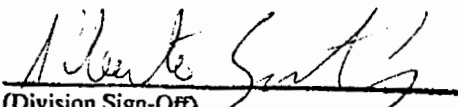
AND/OR

Over-The-Counter Use \_\_\_\_\_  
(21 CFR 807 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)

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Concurrence of CDRH, Office of In Vitro Diagnostic Devices (OIVD)

  
(Division Sign-Off)  
Division of Clinical Laboratory Devices  
510(k) Number   K050536  

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